REMARKS

Applicants concurrently file herewith a Notice of Appeal and a petition (and fee) for three-month extension of time.

Entry of this Amendment is proper because it narrows the issues on appeal and does not require further search by the Examiner.

Claims 3-9, 11-15, 18-24, 26-30, 33-39, and 41-45 are pending in this Application. Applicants have amended claims 3, 18, and 33 to define the claimed invention more particularly. Claims 6, 15, 21, 30, 36, and 45 were previously withdrawn. No new matter is added.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 3, 4, 8, 9, 11-14, 18, 19, 23, 24, and 26-29 stand rejected under 35 U.S.C. §101. Claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, 33-35, 37-39, and 41-44 stand rejected under 35 U.S.C. § 112, first and second paragraphs. Applicants have amended the claims to address the Examiner's concerns.

Claims 3-5, 12, 13, 15, 18-20, 22-24, 27, 28, 33-35, 37-39, 42, and 43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over ANSI/IEEE std.802.1D, 1998 Edition (hereinafter "the 802.1D specification") in view of Williams et al. (US Patent No. 6,515,993, hereinafter "Williams"). Claims 11, 14, 26, 29, 41, and 44 stand rejected under U.S.C. §103(a) as being unpatantable over the 802.1D specification in view of Williams and further in view of Liu et al. (US 2002/0191628, hereinafter "Liu").

Applicants respectfully traverse these rejections in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention (e.g., as defined by exemplary claim 3) is directed to a network system for a network having plural nodes connected.

A node belonging to the network system includes a CPU (Central Processing Unit) executing a learning frame management unit which refers to a source media access control address (MAC SA) table cache to determine whether a learning frame transmission request of

a MAC SA has been made, and a memory system that stores a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame, and the MAC SA table cache which stores the MAC SA which has made a learning frame transmission request.

In a conventional learning bridge network, as described in the Background of the present Application, a learning process enters a port which has received the frame and a MAC SA of the frame in a filtering database so to determine a transfer destination port of the frame. In this system, a learning process does not operate when a node through which a flow passes depending on a direction allows a different asymmetrical flow. Thus, the frame reaches the destination but is also transferred to unnecessary destinations. Therefore, the network becomes busy and the bandwidth usability reduces (e.g., see Application at page 2, line 24 – page 3, line 6).

The claimed invention, however, provides a network having plural nodes connected, wherein a node belonging to the network is provided with a learning frame management unit which refers to a MAC SA table cache to determine whether a learning frame transmission request is made or not, a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame, and a MAC SA table cache which stores the source MAC address (MAC SA) which has made a learning frame transmission request (e.g., see Application at Fig. 16; page 33, lines 14-26; page 4, lines 8-16, page 22, lines 24-27).

With this Arrangement, the invention assigns a VLAN tag for every destination address. For example, when communicating between a subscriber (A) and ISP (B), the tag corresponding to the subscriber (A) of an address is added to the frame transmitted to a subscriber (A) from ISP (B), and the tag corresponding to ISP (B) of an address is added to the frame transmitted to ISP (B) from a subscriber (A).

For this reason, it is necessary to determine the tag which should be added on a destination MAC address. That is, mapping between a destination MAC address and a tag is needed. Therefore, the invention creates the mapping table (MAC forwarding table memory) of a destination MAC address and the tag which should be added by transmitting a learning frame so that such mapping can be performed automatically.

This feature is important because even when the asymmetrical flow is flown by

sending the learning frame through a path opposite to the path where the main signal frame flows, the learning process can be functioned, the network congestion can be remedied from becoming congestion, and the bandwidth usability can be improved (e.g., see Application at page 113, lines 13-18).

II. 35 U.S.C. §101 REJECTION

In rejecting claims 3, 4, 8, 9, 11-14, 18, 19, 23, 24, and 26-29, the Examiner alleges that the claims are directed to non-statutory subject matter.

Applicants have amended claims 3, 18, and 33, in a manner believed responsive to the Examiner's claim rejection.

Applicants submit that the most recent articulation for computer structure-related claims is *In Re Bilski*, wherein the court clearly states that such method claims are statutory if related to a specific machine (see United States Court of Appeals for the Federal Circuit, 2007-1130 (Serial No. 08/833,892) IN RE BERNARD L. BILSKI and RAND A. WARSAW.)

Therefore, Applicants respectively request the Examiner to reconsider and withdraw this rejection.

III. 35 U.S.C. §112, FIRST PARAGRAPH REJECTION

In rejecting claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, 33-35, 37-39, and 41-44, the Examiner alleges that the claims fail to comply with the written description requirement.

Applicants amended claim 3, and similarly claims 18 and 33, to recite, "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame*," to define the claimed invention more particularly, consistent with the Examiner's helpful suggestions.

The Examiner is referred to Fig. 16 and page 33, lines 14-26 of the present Application which show the support for the claim limitation.

Therefore, Applicants respectively request the Examiner to reconsider and withdraw this rejection.

IV. 35 U.S.C. §112, SECOND PARAGRAPH REJECTION

In rejecting claims 3-5, 7-9, 11-14, 18-20, 22-24, 26-29, 33-35, 37-39, and 41-44, the Examiner alleges that the claims are indefinite for failing to particularly point out the invention.

Applicants amended claim 3, and similarly claims 18 and 33, to recite, "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame*," to define the claimed invention more particularly, consistent with the Examiner's helpful suggestions.

Therefore, Applicants respectively request the Examiner to reconsider and withdraw this rejection.

V. THE PRIOR ART REJECTIONS

A. The 802.1D specification and Williams rejection

In rejecting claims 3-5, 12, 13, 15, 18-20, 22-24, 27, 28, 33-35, 37-39, 42, and 43, the Examiner alleges that one of ordinary skill in the art would have combined the 802.1D specification with Williams to render obvious the claimed invention. Applicants respectfully submit, however, that the references would not have been combined as alleged by the Examiner and that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, the 802.1D specification and Williams do not teach or suggest, "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame*," (emphasis added by Applicants) as recited in claim 3, and similarly recited in claims 18 and 33.

The Examiner concedes that the 802.1D specification does not show that the MAC forwarding table stores tag information. The Examiner alleges that Williams teaches the claimed tag operation (Office Action at page 8, lines 7-11).

Williams teaches the port to VLAN index table 601 that associates a VLAN with a given port (col. 10, lines 60-63; Fig. 6). Williams, however, fails to teach or suggest, "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged*

Ethernet frame," (emphasis added by Applicants) as recited in claim 3, and similarly recited in claims 18 and 33.

Since Williams does not overcome the deficiencies of the 802.1D specification, the combination of references fails to render the rejected claims obvious.

Furthermore, Applicants submit that the 802.1D specification and Williams do not teach or suggest, "*a MAC forwarding table memory which stores an output port for a destination MAC address*," (emphasis added by Applicants) as recited in claim 3, and similarly recited in claims 18 and 33.

The Examiner attempts to analogize the filtering database of 802.1D specification to the claimed MAC forwarding table (Office Action at page 8, lines 1-2). The Examiner, however, is incorrect.

Indeed, the 802.1D specification teaches that the alleged filtering database merely supports the creation, updating, and removal of dynamic filtering entries (section 7.9). Indeed, section 7.9 of the 802.1D, upon which the Examiner bases his rejection (or anywhere else for that matter), fail to teach or suggest, "*a MAC forwarding table memory which stores an output port for a destination MAC address*," (emphasis added by Applicants) as recited in claim 3, and similarly recited in claims 18 and 33.

Indeed, the Examiner appears to have confused the limitation of the claimed invention which recites storing an output port with specifying the MAC address (Office Action at page 3, lines 8-11). Indeed, the alleged filtering database does not store an output port for a destination MAC address, as claimed in the claimed invention. Therefore, the 802.1D specification fails to teach or suggest the claimed invention of claims 3, and similarly recited in claims 18 and 33.

Moreover, Applicants submit that one with ordinary skills in the art would not have combined the 802.1D specification with the teachings of Williams.

The Examiner alleges that the 802.1D can be combined with the teachings of Williams, "*in order to provide the ability to tag a frame that is to be transmitted via a tagged port*" (Office Action at page 8, lines 12-15). At most, the Examiner merely makes a circular argument wherein the motivation to modify the primary reference is to obtain the benefits of having modified it.

The Examiner alleges that Williams "*has provided an explicit suggestion of the desirability of the claimed invention, as described below*" (Office Action at page 4, lines 4-6).

The Examiner, however, has failed to show how Williams allegedly suggest the claimed invention.

Accordingly, Applicants request the Examiner to provide an explanation of how the teachings of Williams suggest the claimed invention, as alleged by the Examiner. That is, the Examiner is specifically requested to point out the features of Williams (including reference number and specific passage) that the Examiner is relying upon in his allegations.

Indeed, the Examiner attempts to pick and choose different elements and functions from Williams to enable the non analogous system of the 802.1D specification to appear to have a function similar to the claimed invention. Therefore, Applicants respectfully submit that the Examiner is improperly using the claimed invention as a roadmap and that one of ordinary skill in the art would not have combined the references as alleged by the Examiner.

Therefore, Applicants respectfully submit that, one with ordinary skills in the art would not have combined the 802.1D specification with Williams, and even if combined, the alleged combination does not teach or suggest (or render obvious) each and every feature of the claimed invention. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

B. The 802.1D specification, Williams, and Liu rejection

In rejecting claims 11, 14, 26, 29, 41, and 44, the Examiner alleges that one of ordinary skill in the art would have combined the 802.1D specification with Williams and Liu to render obvious the claimed invention. Applicants respectfully submit, however, that the references would not have been combined as alleged by the Examiner and that, even if combined, the alleged combination of references would not teach or suggest each and every feature of the claimed invention.

That is, the 802.1D specification and Williams, as set forth above in section A, do not teach or suggest, "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame,*"(emphasis added by Applicants) as recited in independent claim 3, and similarly recited in independent claims 18 and 33.

Moreover, Applicants submit that Liu fails to make up the deficiencies of the 802.1D specification and Williams.

Indeed, Liu teaches a design model 11 that includes a lookup step 13 and a forwarding

translation step 15 (paragraphs [0023] and [0024]). Liu, however, fails to teach or suggest "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame*," (emphasis added by Applicants) as recited in independent claim 3, and similarly recited in independent claims 18 and 33.

Indeed, the Examiner does not even allege that Liu teaches or suggests these features. The Examiner merely relies on Liu for allegedly teaching a broadcast table memory and a tag address management table.

Since Liu does not overcome the deficiencies of the 802.1D specification and Williams, the combination of references fails to render the rejected claims obvious.

Therefore, Applicants respectfully submit that, one with ordinary skills in the art would not have combined the 802.1D specification with Williams and Liu, and even if combined, the alleged combination does not teach or suggest (or render obvious) each and every feature of the claimed invention. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

VI. FORMAL MATTERS AND CONCLUSION

Applicants have amended claims 3, 18, and 33 in a manner believed responsive to the Examiner's objections to the specification.

The Examiner is referred to Fig. 16 and page 33, lines 14-26 of the present Application which show the support for this claim limitation, which recites "*a MAC forwarding table memory which stores an output port for a destination MAC address and destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame*," as recited in claim 3, and similarly recited in claims 18 and 33.

In view of the foregoing, Applicants submit that claims 3-9, 11-15, 18-24, 26-30, 33-39, and 41-45, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 04/27/09

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